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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,159

09/26/2006

Jinzhang Yu

2373.002US1

7044

21186

7590

09/02/2008

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EXAMINER

HIJAZ, OMAR F

ART UNIT

PAPER NUMBER

4165

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,159	Applicant(s) YU, JINZHANG	
	Examiner OMAR HIJAZ	Art Unit 4165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/26/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-9 as filed are pending and have been considered below.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "4" has been used to designate both the side fastening panel and the transverse fastening panel. The transverse fastening panel should be labeled as "5" instead. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 1 is objected to because of the following informalities: at line 1, the recitation "for of door" should be replaced with --for door--. In addition, at line 3, the recitation "an L-shape fixed member" should be replaced with --an L-shaped fixed member--. Appropriate correction is required.

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3. Claim 3 is objected to because of the following informalities: at line 2, the recitation "wherein two holes" should be replaced with --wherein the holes-- since "holes" were already mentioned in previous claim 2. Appropriate correction is required.

4. Claims 1, 2, 3, 5, 8, and 9 are objected to because of the following informalities: in claim 1 at line 3, in claim 2 at line 2, in claim 3 at line 4, in claim 5 at line 3, in claim 8 at line 2, and in claim 9 at line 2, the recitation "the fixed member" should be replaced with --the fixed L-shaped member-- for consistency. Appropriate correction is required.

5. Claims 4-9 are objected to because of the following informalities: in claim 4 at line 6, in claim 5 at line 4, in claim 6 at line 5, in claim 7 at line 5, in claim 8 at line 3, and in claim 9 at line 3, the recitation "transverse steel lining plate" should be replaced with -transverse steel lining member--. Appropriate correction is required.

6. Claims 8-9 are objected to because of the following informalities: in claim 8 at line 1 and in claim 9 at line 1, the recitation "pins-are" should be replaced with --pins are--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (International Publication No. WO 03/058018) in view of Kern (U.S. Patent No. 3,828,516).

As per claim 1, Schmidt teaches an insertion assembly (a corner key for connecting profiles together and also to a framework assembly; abstract) for door and window frames (for windows and doors; page 1, lines 9-10) comprising a side frame (14) and a transverse frame (12) disposed perpendicularly thereto (as illustrated profiles 12 and 14 are perpendicular to one another; figure 1), wherein an L-shaped fixed member (10) is provided at the outside of a connection portion of the side frame and the transverse frame (as illustrated, corner key 10 is at the connection portions for both the profiles 12 and 14; figure 1), a side fastening bolt (50) is provided to pass through a through hole (46) at an upright portion of the L-shaped fixed member (10) and a through hole (26) at the side frame (14) (as illustrated, the screw fastens the profile portion with the corner key; figures 1; figure 2A; figure 2B), and a transverse fastening bolt (48) is provided passing through a through hole (44) at a transverse portion of the fixed member (10) and a through hole (24) at the transverse frame (12) to connect a transverse panel (as illustrated, the screw fastens the profile portion with the corner key; figures 1; figure 2A; figure 2B).

Schmidt fails to disclose a side fastening panel.

Kern discloses a frame or sash bar of a window or door (abstract) with a connecting piece 3 which is an intermediate connector between the frame members (figure 4).

Therefore from the teaching of Kern, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly

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of Schmidt to include an intermediate connector as taught by Kern in order to further strengthen the assembly (col. 3, lines 23-25).

As per claim 2, Schmidt teaches pins (42) are provided, each of which is formed at the transverse portion of the L-shaped fixed member (10) and holes (18) are provided at a surface of the side frame opposite to the transverse portion to receive the pin (tabs 40 and 42 have matching shapes in order to facilitate fit engagement into the anchoring channels 16 and 18; page 10, lines 27-28; additional tabs, not shown, may also project from the corner faces 28 and 30; page 11, lines 2-3).

Schmidt fails to disclose pins and corresponding holes are round.

Kern discloses a frame or sash bar of a window or door (abstract) with pins (8) and corresponding holes which are round in shape (figure 4).

Therefore from the teaching of Kern, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly with the tab and slot arrangement of Schmidt to with the round pin and hole configuration as taught by Kern in order to further strengthen the assembly (col. 3, lines 23-25).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (International Publication No. WO 03/058018) in view of Kern (U.S. Patent No. 3,828,516), as applied to claim 2 above, and further in view of Mascioletti et al (U.S. Patent No. 6,503,020).

As per claim 3, the Schmidt and Kern combination discloses all the elements of the claimed invention. Schmidt further discloses holes (18) are provided, each of which

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each of which is formed at an edge of the side frame (as illustrated, hole 18 is located at an edge of the side frame; figure 1) and the side fastening panel is sandwiched between the fastening bolt and the L-shaped fixed member (connecting piece 3 which is an intermediate connector between the frame members; figure 4).

The Schmidt and Kern combination fails to disclose a side steel lining panel is provided in a groove formed between the holes, the side fastening panel is sandwiched between the side steel lining panel and the L-shaped fixed member and the side fastening bolt connects the side panel, the upright portion of the fixed member and the side steel lining panel together.

Mascioletti et al discloses a connection system for securing structural members (abstract) including a bolt (58) which connects a side frame member (12) with a member (14) via an additional connector (38) located in an aperture (40) (figure 7).

Therefore from the teaching of Mascioletti et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt and Kern combination to include a connector member as taught by Mascioletti et al in order to improve the strength of the connector system (col. 1, lines 46-47).

10. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (International Publication No. WO 03/058018) in view of Kern (U.S. Patent No. 3,828,516), and further in view of Mascioletti et al (U.S. Patent No. 6,503,020), and further in view of Biro (U.S. Patent No. 4,689,933).

As per claims 4 and 6, the Schmidt and Kern combination discloses all of the elements of the claimed invention as mentioned in claims 1 and 2 above. Kern further discloses a transverse fastening panel (connecting piece 3 which is an intermediate connector between the frame members; figure 4).

The Schmidt and Kern combination fails to disclose the transverse fastening bolt is connected to the transverse fastening panel.

Mascioletti et al discloses a bolt 58 which connects a side frame member 12 with a member 14 via an additional connector 38 located in an aperture 40 (figure 7).

Therefore from the teaching of Mascioletti et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt and Kern combination to include a side frame member with a bolt attached thereto as taught by Mascioletti et al in order to improve the strength of the connector system (col. 1, lines 46-47).

Additionally, the Schmidt, Kern, and Mascioletti et al combination fails to disclose at a lower portion of the transverse frame is formed a rectangular slot in which a hollow transverse steel lining member is provided, lower ends of the side walls of the slot are engaged to lower extended ends of the transverse steel lining member, a transverse fastening panel is provided within the hollow transverse steel lining panel.

Biro discloses a window sash member with a hollow metallic reinforcing member 150 in a transverse direction which fits into rectangular chamber 109 (col. 4, lines 45-54; figure 4).

Therefore from the teaching of Biro, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt, Kern, and Mascioletti et al combination to include a rectangular reinforcing member as taught by Biro in order to further strengthen the structure (col. 4, lines 38-39).

As per claims 5 and 8, the Schmidt, Kern, Mascioletti et al, and Biro combination discloses all the elements of the claimed invention as mentioned in claims 4 and 6 above. Mascioletti et al. further discloses positioning pins (44) which are formed at an upper surface of the transverse portion, and positioning holes (46) into which the positioning pins can be inserted (col. 3, lines 63-67).

Therefore from the teaching of Mascioletti et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt, Kern, and Biro combination to include a pin and a corresponding hole as taught by Mascioletti et al in order to lock the connector in the aperture (col. 3, lines 66-67).

As per claim 7, the Schmidt, Kern, and Mascioletti et al combination discloses all of the elements of the claimed invention as mentioned in claim 3 above. Kern further discloses a transverse fastening panel (connecting piece 3 which is an intermediate connector between the frame members; figure 4). Mascioletti et al further discloses the transverse fastening bolt is connected to the transverse fastening panel (a bolt 58 which connects a side frame member 12 with a member 14 via an additional connector 38 located in an aperture 40; figure 7).

The Schmidt, Kern, and Mascioletti et al combination fails to disclose at a lower portion of the transverse frame is formed a rectangular slot in which a hollow transverse steel lining member is provided, lower ends of the side walls of the slot are engaged to lower extended ends of the transverse steel lining member, a transverse fastening panel is provided within the hollow transverse steel lining panel.

Biro discloses a window sash member with a hollow metallic reinforcing member 150 in a transverse direction which fits into rectangular chamber 109 (col. 4, lines 45-54; figure 4).

Therefore from the teaching of Biro, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt, Kern, and Mascioletti et al combination to include a rectangular reinforcing member as taught by Biro in order to further strengthen the structure (col. 4, lines 38-39).

As per claim 9, the Schmidt, Kern, Mascioletti et al., and Biro combination discloses all the elements of the claimed invention as mentioned in claim 7. Mascioletti et al. further discloses positioning pins (44) which are formed at an upper surface of the transverse portion, and positioning holes (46) into which the positioning pins can be inserted (col. 3, lines 63-67).

Therefore from the teaching of Mascioletti et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame assembly of the Schmidt, Kern, and Biro combination to include a pin and a

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corresponding hole as taught by Mascioletti et al in order to lock the connector in the aperture (col. 3, lines 66-67).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. patent No. 6,067,760 discloses a corner bracket for doors and windows with an L-shaped connecting member. U.S. Patent No. 4,015,382 discloses a reinforced door frame made up of two members connected via screws. U.S. Patent No. 3,835,610 discloses a joint for joining structural members with a bolt connected to an internal plate member. U.S. Patent No. 5,046,791 discloses a frame attaching component with an L-shaped connecting member joining two frame elements via screws. UK Patent 2,159,864 discloses a window frame component secured together by connecting members via slots and tabs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR HIJAZ whose telephone number is (571)270-5790. The examiner can normally be reached on Mon-Fri 9:30 a.m. - 7:00 p.m. (alternating Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on (571)272-6782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OFH

/Lynda Jasmin/
Supervisory Patent Examiner, Art Unit 4165